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In The
# Supreme Court of the United States

NEW RAILHEAD MANUFACTURING, L.L.C.,

*Petitioner,*

v.

VERMEER MANUFACTURING COMPANY,
*and* EARTH TOOL COMPANY, L.L.C.,

*Respondents.*

**On Petition For A Writ Of Certiorari To The United States Court Of Appeals For The Federal Circuit**

## PETITION FOR WRIT OF CERTIORARI

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## QUESTIONS PRESENTED

Section 102(b) of Title 35 provides, in pertinent part, that a person is entitled to a patent unless the invention was "in public use" more than one year prior to the date on which the application for United States patent was filed. David M. Cox invented a new method of horizontal directional drilling using a drill bit with a novel shape that caused it to fracture its way through rock formations. Because Cox had no way to test his invention, Cox asked a commercial drill operator, Earl Freemen, if Freeman would test the bit for Cox on a confidential basis. Freeman was allowed to use the new bit without charge and Cox and his company received no benefit from Freeman's activities other than Freeman's reports on performance and bit durability. Some of these activities took place more than one year prior to Cox's earliest patent application date. The Federal Circuit held that the activities constituted "public use" under Section 102(b) and that durability testing of the bit did not excuse "public use" of the drilling method. Circuit Judge Dyk, dissenting, found that the use was subject to an understanding of confidentiality, provided no commercial benefit to the inventor and, therefore, could not be "public use" under Section 102(b). The dissent further found that even if "public use" existed, it was excused by the necessity to test the durability of the drill bit because durability of the bit is an implied feature of the claimed method.

The questions presented are:

1) Can use of a method under restriction of confidence, conducted without commercial benefit to the inventor, properly be deemed a "public use" barring a patent under 35 U.S.C. § 102(b)?

## QUESTIONS PRESENTED – Continued

2) Does the first successful use of a method cut off the availability of the "experimental use" exception for tests which then use the method to determine if the durability required for practical utility is present?

## LIST OF PARTIES

The parties to the proceedings below were the Petitioner, New Railhead Manufacturing, L.L.C., and the Respondents, Vermeer Manufacturing Company and Earth Tool Company, L.L.C.

## CORPORATE DISCLOSURE STATEMENT

Petitioner New Railhead Manufacturing Company L.L.C. has no parent corporation and there is no publicly held company owning 10% or more of its stock.

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## PETITION FOR WRIT OF CERTIORARI

The Petitioner, New Railhead Manufacturing, L.L.C., respectfully prays that a writ of certiorari issue to review the judgment and opinion of the United States Court of Appeals for the Federal Circuit, entered in the above-entitled proceeding on July 30, 2002. A petition for rehearing was timely filed but denied by that court on September 25, 2002.

## OPINIONS BELOW

The opinion of the Court of Appeals for the Federal Circuit is reported at 298 F. 3d 1290, and is reprinted in the appendix hereto, App. 1, *infra*. The denial of the petition for rehearing has not been reported and is reprinted in the appendix hereto, App. 47, *infra*.

The Order granting Earth Tool's Motion for Summary Judgment, filed September 28, 2001, has not been reported. It is reprinted in the Appendix hereto, App. 26, *infra*. The Order granting Vermeer's Motion for Summary Judgment filed September 28, 2001, has not been reported. It is reprinted in the Appendix hereto, App. 39, *infra*.

## JURISDICTION

Jurisdiction in the United States District Court for the Northern District of Texas was pursuant to the provisions of 28 U.S.C. § 1338(a). The appeal to the United States Court of Appeals for the Federal Circuit was timely taken pursuant to the provisions of 28 U.S.C. § 1295. The

jurisdiction of this Court to review the judgment of the Federal Circuit is invoked under 28 U.S.C. § 1254(1). The judgment of the Federal Circuit sought to be reviewed was entered on July 30, 2002 and, after a timely petition for rehearing was filed, the order denying rehearing was entered on September 25, 2002.

## STATUTES INVOLVED

35 U.S.C. § 102. Conditions for patentability: novelty and loss of rights to patent

A person shall be entitled to a patent unless –

* * *

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States, or

* * *

## STATEMENT OF THE CASE

In late 1995, Dave Cox was attempting to invent a new drill bit and drilling method that would solve a persistent problem in horizontal directional drilling, namely the problem of drilling through rock formations as opposed to soil. Cox's concept was to convert the rotational energy of the drill string into an impact-fracturing type force instead of relying solely on the cutting or shearing type force used by conventional rotational types of drill

bits. Instead of a smooth controlled rotational cutting action, Cox envisioned using the rotational force of the drill stem to fracture or hammer the rock in the borehole. Cox created a new drill bit geometry where the bit was purposefully off center with the drill stem itself, creating a wobbling tool that would not spin concentrically in a borehole. Because the borehole created by the tool would be larger than the diameter of the bit itself, the bit could move laterally within the borehole as it rotated, crashing from side to side, and creating the sought after hammering effect on the walls of the borehole.

Petitioner New Railhead Manufacturing, L.L.C. (hereinafter "Railhead") was Cox's company and the only person outside of Railhead employees with whom Cox discussed his invention was Mr. Earl Freeman. In 1995-96 Earl Freeman was a horizontal directional drilling machine operator who worked for Eagle Pipeline. Since Cox and Railhead had no way to test the bit, Cox allowed Freeman to take the bit to jobs to test it with the express understanding that Freeman would report back to Cox on how the bit performed and keep his activities discreet. Freeman understood the bit was not for sale. Cox instructed Freeman to find rock or hard material to drill in because Cox wanted to find the limitations of his bit even if it became torn up in the process. Cox accompanied Freeman to job sites on several occasions but could not follow Freeman to every job. Freeman did report to Cox orally and they would talk back and forth at night. Cox went to job sites with Freeman to better determine if the drill bit needed more or less forward pressure during drilling. Freeman's use of the prototype drill bits was conditioned on keeping information about the bits and their method of use secret, and Freeman was under a duty

not to disclose any information about the bits or how they were used underground. During this time everyone at Railhead knew that the drill bit was to be kept secret. Freeman told Cox he put the drill bit in a box and kept it under the seat of his truck and locked it up.

The method of using the bit was developed along with the product itself. Cox tinkered with the angle of the teeth and adjusted the heel portion of the bit to get the best results. He handmade new bits with new angles and "put them in the ground and drilled with them." Cox experienced a failure rate on his test bits saying. "We quit and we parked them." Cox would use feedback from Freeman to try different geometries of the drill bits based on what Freeman said was happening in the field ("He'd give me descriptive detail of how it acted and as I would take something off or maybe add more toe and less heel, he would feedback to me what it did.").

By mid-February, 1996, Jim Cox, Dave Cox's brother, wrote up an initial disclosure of the concept and design of the bit and sent it to a patent lawyer. The disclosure consisted of a one page document and three photographs. The first sale of the new type of bit occurred on February 29, 1996.

On February 5, 1997, eleven months and a few days into the one year grace period provided for the "on sale" bar under 35 U.S.C. § 102(b), a provisional patent application was filed. However, the testimony indicated that some of the earliest uses by Earl Freeman occurred in January, 1996, some thirteen months prior to filing of the provisional application (outside of the one year grace period provided by Section 102(b)).

Defendant Earth Tool Company, L.L.C. had tried to develop a rock breaking tool for horizontal directional drilling, but its tool performed marginally in testing. A representative of Vermeer Manufacturing Company gave one of Cox's Railhead bits to several Earth Tool engineers, who promptly took it back to their shop and measured it. Earth Tool then introduced its allegedly infringing "Trihawk" drill bit into the marketplace.

This lawsuit was brought against both defendants shortly after the '283 patent issued on May 4, 1999. The '283 patent has claims directed to an asymmetric drill bit for horizontal directional drilling in rock. On September 14, 1999, the '743 patent-in-suit was issued and was added to the litigation. The '743 patent is directed to a "method of horizontal directional drilling in rock."

Vermeer moved for Summary Judgment of Invalidity under 35 U.S.C. § 102(b)'s public use bar. The District Court held that Earl Freeman's use of Railhead's bit on at least six occasions at various Eagle Pipeline commercial jobs during January, 1996 constituted "public uses of the '743 patent's method." App. 43. Finding that Railhead had the burden of producing convincing evidence of experimental use to rebut the prima facie showing of "public use," the District Court held that Railhead failed to present such evidence regarding the '743 patent's drilling method. App. 44. The District Court held that Railhead's evidence focused on experimentation regarding the drill bit and that no specific evidence tending to demonstrate that Freeman's uses constituted experimentation regarding the drilling method was presented. As a consequence, the District Court granted Vermeer's Motion for Summary Judgment of Invalidity based on public use under Section 102(b). App. 45-46.

The Federal Circuit, with Circuit Judge Dyk dissenting in part, affirmed the finding of "public use." The panel found that Earl Freeman's use of the method was public "beyond debate" because the method was performed "at a commercial job site on public land on the side of an interstate highway" and because the inventor Cox "admitted he had no control over the practice of the patented method." App. 15. The dissent found Freeman's activities did not constitute "public use" since the use actually took place under public land, hidden from view, and there had been no showing whatsoever that the use was anything but confidential. App. 19. The dissent further noted that though the job sites were "commercial," there was no evidence on Summary Judgment that the inventor profited from the alleged use or gained a commercial advantage and the mere fact that Eagle Pipeline (Freeman's employer) gained a profit was irrelevant. App. 22.

The Federal Circuit further held that Freeman's January 1996 use of the patented method constituted a reduction to practice as the method worked for its intended purpose. Accordingly, as a matter of law, none of the subsequent uses of the method could be experimental. App. 17. The dissent found that durability is an implied feature of the method claimed, as a drilling method would not be found to serve its intended purpose if the practice of the method prematurely destroyed the tools used to practice the method. App. 24. Therefore, the dissent reasoned, Freeman's use was part of a reasonable evaluation period necessary to determine if the invention would serve its intended purpose and cannot be considered to be activities which started the Section 102(b) bar to accrue. App. 24.

## REASONS FOR GRANTING THE WRIT

### I. The decision below further confuses the definition of "public use" under Section 102(b) and thereby injects uncertainty into the patenting process.

The holding in this case is that several trials of an underground drilling method that fractured rock formations, carried out by a person under a duty of confidence to the inventor, for which the inventor received no commercial benefit, with no evidence of any public disclosure of how the rock was being drilled, constitutes "public use," barring a patent filed thirteen months later. Under this Court's precedent, a single lady's use of a corset stay in her undergarments was held to be a "public use" while use of a toll road open to the public did not bar a patent.[1] The proper definition of "public use" under the Patent Act, easily confused but extremely important to the incentives of the patent system, once again requires this Court's attention.

In *Pfaff v. Wells Electronics Inc.*, 525 U.S. 55 (1998), this Court noted that the patent laws seek both to protect the public's right to retain knowledge already in the public domain and the inventor's right to control whether and when he may patent his invention. *Id.* at 65. *Pfaff* clarified the starting point of the "on sale" bar by announcing the more certain two part test of (1) an invention ready for patenting and (2) a commercial offer for sale, to replace

[1] *Egbert v. Lippman*, 104 U.S. 333 (1881) (inventor delivered a corset stay to a lady without restriction on her use of same); *City of Elizabeth v. Am. Nicholson Pavement Co.*, 97 U.S. 126 (1877) (open normal use of tollroad laid down by patented method held primarily for experiment and therefore not "public").

the uncertain "all circumstances" test and resolve inconsistent lower court rulings on the necessity for a "substantially completed" invention. *Id.* at 66. After *Pfaff*, it should be clear to inventors "whether and when" they may patent inventions they have put to commercial use. If they have made a commercial offer for sale and their invention is well defined enough that it could be patented, the "on sale" statutory bar period begins.

The "public use" bar of Section 102(b) also needs to be applied in a way that protects an inventor's right to "control whether and when he may patent his invention." Uncertainty as to what activities do and do not constitute "public use" impedes progress and works against the aim of the patent law in precisely the way uncertainty over the "on sale" bar did prior to *Pfaff*.

The limiting provision of Section 102 of the Patent Act serves to both exclude ideas that are in the public domain from patent protection and confine the duration of the monopoly to the statutory term. *Id.* at 64, citing *Frantz Mfg. Co. v. Phenix Mfg. Co.*, 457 F.2d 314, 320 (7th Cir. 1972). Thus, an inventor who commercially benefits from his invention is constrained from extending his period of exclusivity by the "on sale" bar.[2] An inventor who dedicates or otherwise releases to the public his invention without restriction cannot later obtain a patent and recapture the invention from the public domain after such "public use."[3] Just as the purpose of the "on sale" bar is to confine the duration of the inventor's monopoly to the statutory term,

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[2] *Pennock v. Dialogue*, 2 Pet. 1, 24 (1829); *Consolidated Fruit-Jar Co. v. Wright*, 94 U.S. 92 (1876).

[3] *Egbert v. Lippman*, *supra*.

the purpose of the "public use" bar is to not allow the inventor to withdraw something he dedicated to the public domain.

*Pfaff's* clarification of the "on sale" bar provides inventors with certainty as to when the law would consider acts to be in the realm of extending the monopoly term. Providing inventors with certainty regarding what acts will and will not be legally interpreted as being a dedication to the public under the "public use" bar is of equal importance.

Prior to the Federal Circuit's ruling in this case, no use of an invention by a third party under a duty of confidence to the inventor, where the use provided no commercial benefit to the inventor, has ever been held to be a "public use" under Section 102.[4] By focusing its decision on the public nature of the place of use (beside a public highway) and the lack of ability of the inventor to physically control the invention (which was used as the opportunity to drill through rock presented itself) the Federal Circuit has created a new definition of "public use" that presumes a dedication to the public domain by an

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[4] *Moleculon Research Corp. v. CBS, Inc.*, 793 F.2d 1261 (Fed. Cir. 1986), cert. denied, 479 U.S. 1030 (1987) (inventor allowing another to use puzzle not public use due to expectation of confidentiality); *Vulcan International Inc. v. Jerr-Dan Corp.*, 31 U.S.P.Q. 2d 1911, 1915 (N.D. Miss. 1994) ("while public use need not be open and one use of the device . . . can be sufficient to establish public use, the use observed must be to one other than the inventor or those under an obligation to her not to disclose that use or what was observed"); *Loral Corp. v. The B.F. Goodrich Co.*, 14 U.S.P.Q. 2d 1081, 1106 (S.D. Ohio 1989), rev'd on other grounds, 899 F.2d 1228 (Fed. Cir. 1989) (unpublished) (showing of film on invention not "public" because of duty of confidentiality); *Xerox Corp. v. 3Com Corp.*, 36 F.Supp. 2d 492 (W.D.N.Y. 1998) (professional obligation to treat material as confidential, no commercial exploitation prior to critical date).

inventor who allows use in a public place outside his physical control, regardless of the fact that there was a reasonable expectation that the invention would remain confidential.

In this case there was no evidence that anyone actually looked underground to see the claimed method of underground drilling and unrefuted evidence that the only person who performed the method understood and agreed he was under a duty of confidence to the inventor. App. 20. But the Federal Circuit held that allowing a third party to use the method under commercial operating conditions in unrestricted locations was "public use" "beyond debate." App. 15. How "private" a setting for use of the method would be required to avoid this result? How much physical control should the inventor have exerted over when and how the method was performed in order to be found not to have dedicated his invention to the public domain? Under this new test, an inventor's express understanding that use of his invention will remain confidential is subjugated to a post facto ruling that the use *could* have exposed the invention to the public (regardless of whether it actually did or not).

The text of Section 102(b) itself provides the correct approach. Where, as here, there is no evidence that the inventor received any monopoly extending benefit from the questioned activity, the patent barring activity must be "public" in a way that demonstrates either a willful dedication to the public (as by unrestricted display or use by the inventor) or dedication by indifference (as by unrestricted delivery of the invention to another). Common sense dictates that when the activity is carried out by another who has promised the inventor to maintain the activity confidential, such activity remains "private"

absent evidence of actual public knowledge resulting from those acts.

"Public use" under the Patent Act should require either a showing of actual public knowledge or facts that support a finding that the inventor knowingly or through indifference gave up his right to patent. Such a definition would guard against an inventor's belated attempt to withdraw property from the public domain while assuring that inventors who take steps to protect their inventions can obtain needed assistance from others.

## II. The decision below conflicts with this Court's precedents requiring that third party use of an invention be without restriction by the inventor in order to constitute "public use," thereby unnecessarily expanding the statutory bar under Section 102(b).

It is not contested that use by an independent third party without knowledge or consent of the inventor can be "public use." This type of "public use" is evidence of what the public domain contains, independent of any disclosures by the inventor. It was such independent use by the alleged infringer in *Electric Storage Battery Co. v. Shimadzu*, 307 U.S. 5 (1939) that was found to be "public use." The Federal Circuit's reliance on that case to support the proposition that the use here, derived from and at the request of the inventor, was "public" is misplaced. The inquiry here is not whether others had already placed the drilling method in the public domain but whether the inventor, through his own actions, has done so.

The other two cases cited by the Federal Circuit in support of its holding of "public use" specifically recognize and require critical facts not present here, namely that the

uses be with the consent of the inventor *and without restriction or obligation of secrecy to the inventor.*[5] In *Lough v. Brunswick Corp.*, 86 F.3d 1113, 1119 (Fed. Cir. 1996) the court defined "public use" as including "any use of [the claimed] invention by a person other than the inventor who is under no limitation, restriction or obligation of secrecy to the inventor." The most expansive statement by this Court regarding the reach of the "public use" bar contains precisely the same requirement that the use by "another" be by one who is under no limitation, restriction or obligation of secrecy. In *Egbert v. Lippman*, the Court stated:

> If an inventor, having made his device, gives or sells it to another, to be used by the donee or vendee, *without limitation or restriction, or injunction of secrecy*, and it is so used, such use is public, even though the use and knowledge of use may be confined to one person.
>
> 104 U.S. at 336 (emphasis supplied).

The Federal Circuit's decision in this case expands the definition of "public" to include those who would have use of the invention only because of an agreement with the inventor to retain such use in confidence. Under this expanded definition of "public use" an inventor can never be certain that allowing another to use his invention in confidence will not trigger the bar, even where, as here, there is no evidence that such use actually exposes the invention to the public. Such an expansion of the law of

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[5] As noted by the dissent, there was no showing by defendants that the method was used by anyone not under a duty of confidentiality to the inventor. App. 20.

"public use" is unwarranted by the purposes which are served by Section 102 of the Patent Act, and unnecessarily hamstrings inventors' progress.

## III. The decision below conflicts with this Court's precedents allowing durability to be the subject of "experimental use" even where a process has been completed by an actual practice thereof.

Under the holding of the Federal Circuit, the activities of the inventor in *City of Elizabeth v. Am. Nicholson Pavement Co.*, 97 U.S. 126 (1877), would not constitute experimental use. The invention in that case was a method of constructing a road. Having carried out each step of that method successfully, the Federal Circuit would now find that further testing of the road itself for durability does not qualify as experimentation of the *method*. In similar fashion, once the claimed *method* for laying down an athletic track surface was completed in *Seal-Flex, Inc. v. Athletic Track & Court Constr.*, 98 F.3d 1318, 40 U.S.P.Q. 2d 1450 (Fed. Cir. 1996), any use and monitoring of the surface itself would not constitute experimental use. In both cases the uses in question met each and every element of the method claims, yet the reasonable necessity for testing for the implied feature of durability to complete the invention was recognized as an exception to barring use.

In *Pfaff, supra*, this Court noted that "the experimental use doctrine has not generated concerns about indefiniteness." *Id.* at 67. The new rule in this case, however, does just that. Under the Federal Circuit's decision, inventors of methods which cannot be known to be useful until durability is established will be held to have ended

their ability to experiment after the first successful practice of the method. This is a result of the Federal Circuit's use of a case on a method for making decorative emblems as precedent in this case dealing with underground directional drilling through rock formations.

The Federal Circuit found it to be of "crowning importance" that all the evidence of New Railhead indicated it was the drill bit, and not the method of its use, which was being tested by Freeman. App. 15. As the dissent correctly points out, though the method and the bit were not separately addressed by the evidence, the two could not be separated. "Drilling with the experimental bits was plainly a test of the claimed method. The method would not work if the drill bit did not work. During the experimental period both the drill bit and the method of using it were being tested." App. 23.

The Federal Circuit's strict new rule that separate evidence of testing of the method, as opposed to testing of the durability of items used to practice the method, is required to prove experimental use, finds no support in the law. The method *D.L. Auld v. Chroma Graphics Corp.*, 714 F.2d 1144, 219 U.S.P.Q. 13 (Fed. Cir. 1983) was for making decorative emblems. There was no evidence that gearing up the process to make emblems commercially would result in different emblems or would involve any special durability questions. Presumably the same known method steps would be practiced by machines instead of by hand.

However, in the present case, any change in bit geometry caused the method of drilling through rock to change. Thus, every change in the shape of the bit resulted in a change in the method of drilling rock. Bit geometry and wear are inextricably intertwined with how the bit

will break rock in the borehole. The method claim at issue describes the motion of the drill bit as it breaks rock and drilling with the experimental bits was plainly a test of the claimed method.

In one of this Court's earliest boring cases, it was recognized that differences in underground earth and rock formations require an inventor to test his process in different locations, even after an initial successful practice of the method:

> "The first experiment was a success in this, that it proved the possibility of obtaining a supply of water by this process: but, of course, it could not prove that a tube could be driven down to a water-bearing stratum in all localities, with the cheapness and dispatch necessary to render the process one of general utility. It was natural, therefore, to suppose, that, before the process could be declared to be satisfactory, other experiments should be made." *Beedle v. Bennett*, 122 U.S. 71, 77 (1886), citing *Andrews v. Carman*, 13 Blatchford 307, 325.

## CONCLUSION

For the foregoing reasons, Petitioner respectfully requests that the Court grant this Petition for Writ of Certiorari.

Respectfully submitted,

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# APPENDIX

**NEW RAILHEAD MANUFACTURING, L.L.C., Plaintiff-Appellant,**
**v.**
**VERMEER MANUFACTURING COMPANY and Earth Tool Company, L.L.C., Defendants-Appellees.**

**No. 02-1028.**

United States Court of Appeals,
Federal Circuit.

July 30, 2002.

Rehearing En Banc Denied
Sept. 25, 2002.

Roy W. Hardin, Locke, Liddell & Sapp, LLP, of Dallas, Texas, argued for plaintiff-appellant.

Jon R. Trembath, Merchant & Gould PC, of Minneapolis, Minnesota, argued for defendant-appellee Vermeer Manufacturing Company. With him on the brief was Jared S. Goff.

Craig B. Florence, Gardere Wynne Sewell LLP, of Dallas, Texas, argued for defendant-appellee Earth Tool Company, L.L.C. Of counsel was Stacy R. Obenhaus.

Before MAYER, Chief Judge, MICHEL and DYK, Circuit Judges.

MICHEL, Circuit Judge.

Plaintiff-Appellant New Railhead Manufacturing, L.L.C. ("New Railhead") owns United States Patent Nos. 5,899,283 ("the '283 patent") and 5,950,743 ("the '743 patent"), drawn to a drill bit for horizontal directional drilling of rock formations and a method for horizontal directional drilling, respectively. New Railhead sued

Vermeer Manufacturing Company ("Vermeer") and Earth Tool Company, L.L.C. ("Earth Tool"), for infringement in the United States District Court for the Northern District of Texas based upon their manufacture and distribution, respectively, of a competing drill bit. Both patents-in-suit were invalidated under 35 U.S.C. § 102(b). *New Railhead Mfg. Co. v. Vermeer Mfg. Co. & Earth Tool Co.*, Civ. Act. No. 4:99-CV-355-Y (Sept. 28, 2001 Order granting Earth Tool's motion for summary judgment of invalidity of the '283 patent based on the on-sale bar); *New Railhead Mfg. Co. v. Vermeer Mfg. Co. & Earth Tool Co.*, Civ. Act. No. 4:99-CV-355-Y (Sept. 28, 2001 Order granting Vermeer's motion for summary judgment of invalidity of the '743 patent based on prior public use). New Railhead appeals. We affirm.

## I

Horizontal (or lateral) directional drilling is necessary, for example, when installing utilities around immovable objects such as roadways, rivers, or lakes. David Cox, co-owner of New Railhead, invented the drill bit and method claimed in the '283 and '743 patents to overcome prior art problems with horizontal drilling through hard rock formations. The boring system disclosed by the Cox patents uses a drill bit with a body that contains fixed and semi-floating cutting points and one or more fluid channels to lubricate and disperse formations that have been cut or fractured, without using jetting fluids that are traditionally used to steer such drilling apparati. '283 patent, col. 1, ll. 42-46, 59-64. Claim 1 of the '283 patent is representative of the seven product claims (emphasis on pertinent claim limitation):

1. An asymmetric drill bit for horizontal directional drilling in rock, comprising:

a bit body attached to an end of a sonde housing;

the unitary bit body *being angled with respect to the sonde housing* the bit body being nonmovable with respect to the sonde housing in drilling operation; and

the bit body being mounted with a plurality of substantially forward-facing end studs extending from a front face of the bit body.

Likewise, claim 1 of the '743 patent is representative of the four method claims:

1. A method of horizontal directional drilling in rock, comprising the step of causing a drill bit at one end of a drill string to intermittently rotate as it digs in, stops rotation until the rock fractures, and then moves after fracture in a random, orbital intermittent motion.

Notably, New Railhead acknowledges that the method of the '743 patent is performed whenever the drill bit of the '283 patent is used.

The patents-in-suit were filed as continuation-in-part applications that claimed the priority date of a provisional application filed by New Railhead on February 5, 1997. That provisional discloses a "directional earth boring tool" wherein "the heel-down method of attachment [of the bit] to the drill body helps to create the random elliptical orbital motion that causes the high impact fracturing technique." Under headings labeled "Operational assumptions" and "Theory of Operation," the provisional application further alludes to the "high included angle offsets for

directional steering," and the enhanced performance that results from "multiplying the fracturing effect through leverage on the main drilling points." The provisional concludes with two drawings that show the bit and the sonde housing that holds the bit during operation; however, both drawings show the drill bit in an "exploded" view, *i.e.*, the bit is not shown attached to the drill bit housing. Moreover, nowhere in the provisional application is the bit body expressly described as being "angled with respect to the sonde housing" as recited in claim 1 of the '283 patent. (As noted by the district court, Cox testified that the claim language "angled with respect to the sonde housing" meant that the drill bit had a toe (front portion) and a heel (rear portion), and that the toe-to-heel ratio was "the amount above and the amount below [the] outer circumference of the sonde housing.")

The '283 patent issued on May 4, 1999, and New Railhead filed this lawsuit the following day. It amended its complaint in January 2000 to include the '783 patent, which had issued on September 14, 1999.

At the close of discovery, Earth Tool moved for partial summary judgment of invalidity of the '283 patent based on the on-sale bar of 35 U.S.C. § 102(b). The parties did not dispute that commercial embodiments of the patented drill bit were sold during the spring and summer of 1996 – more than one year before the November 1997 filing date of the non-provisional application, but not more than one year before the filing date of the February 1997 provisional application to which it claimed priority. Earth Tool argued, however, that the utility application was not entitled to the priority date of the provisional because the disclosure in the provisional specification failed to adequately describe the invention claimed in the '283 patent

as required by 35 U.S.C. § 119(e)(1). The district court agreed, concluding "nothing in this [provisional specification] language states that the drill bit is 'angled with respect to the sonde housing' or otherwise describes the toe, the heel, or the toe-to-heel ratio." The court further found that Cox had admitted as much in his deposition, and that his later contrary declaration submitted in opposition to partial summary judgment could not, as a matter of law, create a genuine issue of material fact on this point. Thus, because the '283 patent was not entitled to claim the priority date of the provisional, New Railhead's mid-1996 commercial sales constituted a § 102(b) bar.

Vermeer also moved for summary judgment of invalidity, arguing that the '743 patent was invalid because the method claimed therein had been in public use for more than one year before the February 1997 filing date of the provisional application. Specifically, Cox testified in his deposition that on a number of occasions beginning in January 1996 he had allowed Earl Freeman, an acquaintance who was the foreman of a drilling team working for a third party, to test the drill bits at a public job site to determine if they functioned properly. The district court agreed with Vermeer that Freeman's repeated use of the *method* disclosed in the '743 patent to test, among other things, the *durability* of the *drill bits* that were the physical embodiment of the '283 patent constituted a public rather than experimental use. (J.A. 19 20).

New Railhead appeals.[1] We have jurisdiction under 28 U.S.C. § 1295(a)(1).

## II

Summary judgment is appropriate "if the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to a judgment as a matter of law." Fed.R.Civ.P. 56(c). We review a district court's grant of summary judgment of invalidity without deference, drawing all reasonable factual inferences in favor of the non-movant. *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 255, 106 S.Ct. 2505, 91 L.Ed.2d 202 (1986); *Conroy v. Reebok Int'l, Ltd.*, 14 F.3d 1570, 1575, 29 USPQ2d 1373, 1377 (Fed.Cir.1994).

## III

Because the parties do not dispute that the patented drill bit was the subject of a commercial offer for sale more than one year before the utility application was filed, the '283 patent is invalid if it is not afforded the priority date of the provisional application. 35 U.S.C. § 102(b) ("A person shall be entitled to a patent unless . . . the invention was . . . on sale

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[1] In addition to appealing the summary judgment motions, New Railhead asserts that the district court abused its discretion by failing to allow New Railhead to file a second amended complaint to add causes of action arising after the lawsuit was filed, based upon actions taken by Vermeer allegedly "to punish Railhead for enforcing its patents." We summarily reject this argument.

in this country, more than one year prior to the date of the application for patent in the United States.").

As a part of the Uruguay Round Agreements Act, the Patent Statute was amended to allow applicants for United States patents to file provisional applications that could provide the priority date for a non-provisional utility application filed within one year of the provisional. *See* 35 U.S.C. § 111(b). Such a provisional application need only include a specification conforming to the requirements of 35 U.S.C. § 112 ¶ 1 and at least one drawing filed under § 113; no claims are required. 35 U.S.C. §§ 111(b)(1), (2). However, for the non-provisional utility application to be afforded the priority date of the provisional application, the two applications must share at least one common inventor and the written description of the provisional must adequately support the claims of the non-provisional application:

> An application for patent filed under section 111(a) or section 363 of this title *for an invention disclosed in the manner provided by the first paragraph of section 112 of this title in a provisional application filed under section 111(b) of this title,* by an inventor or inventors named in the provisional application, shall have the same effect, as to such invention, as though filed on the date of the provisional application filed under section 111(b) of this title, if the application for patent filed under section 111(a) or section 363 of this title is filed not later than 12 months after the date on which the provisional application was filed and if it contains or is amended to contain a specific reference to the provisional application.

35 U.S.C. § 119(e)(1) (emphasis added). In other words, the specification of the *provisional* must "contain a written description of the invention and the manner and process of making and using it, in such full, clear, concise, and exact terms," 35 U.S.C. § 112 ¶ 1, to enable an ordinarily skilled artisan to practice the invention *claimed* in the *non-provisional* application.

New Railhead argues that the district court erred by concluding that the specification of the provisional did not support the claims of the '283 patent. In particular, New Railhead asserts that Cox was always in possession of the asymmetrical heel-toe structure and that the district court went astray by focusing on whether the provisional application disclosed the "importance" of the angled structure rather than whether it disclosed the angled structure at all. In its view, one of ordinary skill would readily understand from the "totality of the disclosure," *i.e.* the drawings together with the provisional written description, that the drill bit was angled with respect to the sonde housing.

We discern no error in the district court's conclusion that this claim limitation was not adequately supported by the provisional, as the factual bases girding its conclusion are so solid that no reasonable jury could find otherwise. The district court relied in particular on the admissions in the deposition testimony of Cox himself, in which he explained that he knew the drawings contained the heel-toe angle because he understood the configuration of the device, not necessarily because the drawings showed such a configuration. In addition to Cox's testimony, the district court had before it the testimony of Joseph Steele, the New Railhead employee responsible for the company's research and development (and the person aside from Cox most familiar with the patented drill bit), who averred

that he could not tell from the drawings in the provisional whether the heel and toe of the drill bit extended beyond the sonde housing. Randy Runquist, a designer and engineer for Vermeer testified that he, too, was unaware of the angled features of the drill bit from the provisional drawings.

Cox's later declaration, submitted in opposition to the motion for partial summary judgment, was at best an equivocal attempt to refine his deposition testimony. But even when viewed in a light most favorable to New Railhead, one is left with no clear indication that the provisional application adequately describes to one of ordinary skill in the art the "heel-toe" angle between the bit and the housing:

> *To my eye* the drawings which were submitted with the provisional application clearly show a heel portion and a toe portion, each of the portions extending respectively above and below the outer circumference of the sonde housing. Although the drawings show the two pieces in exploded configuration, I believe that because they are accurately scaled drawings of the actual tool, one of ordinary skill could actually construct the tool itself from these drawings *and if that were done, the heel and toe portions would be present.*

(emphases added). This averment not only fails to create a genuine issue of material fact regarding whether the written description has been satisfied, but it also conflates the concepts of written description and enablement in the process. "The purpose of the written description requirement is broader than to merely explain how to 'make and use'; the applicant must also convey with reasonable clarity to those skilled in the art that, as of the filing date

sought, he or she was in possession of the invention." *Vas-Cath Inc. v. Mahurkar,* 935 F.2d 1555, 1563-64, 19 USPQ2d 1111, 1117 (Fed.Cir.1991). That is, the disclosure must show he had invented each feature that is included as a claim limitation. The adequacy of the written description (*i.e.,* the disclosure) is measured from the face of the application; the requirement is not satisfied if one of ordinary skill in the art must first make the patented invention before he can ascertain the claimed features of that invention. *Cf. Martin v. Mayer,* 823 F.2d 500, 505, 3 USPQ2d 1333, 1337 (Fed.Cir.1987) ("It is not a question of whether one skilled in the art might be able to construct the patentee's device from the teachings of the disclosure [but] whether the application necessarily discloses that particular device." (quoting *Jepson v. Coleman,* 50 C.C.P.A. 1051, 314 F.2d 533, 536, 136 USPQ 647, 649-50 (CCPA 1963))).

New Railhead's repeated assertions that Cox was at all times in possession of the claimed invention are somewhat misdirected. Although we have recently noted the particular usefulness of the "possession" inquiry when a patentee claims an earlier filing date under 35 U.S.C. § 119, we have at the same time cautioned that the written description requirement "is not subsumed by the 'possession' inquiry." *Enzo Biochem, Inc. v. Gen-Probe Inc.,* No. 01-1230, slip op. *granting reh'g* at 19 (Fed.Cir. July 15, 2002). Identity of description is not necessary. *See, e.g., Crown Operations Int'l, Ltd. v. Solutia Inc.,* 289 F.3d 1367, 1376, 62 USPQ2d 1917, 1922 (Fed.Cir.2002) ("[T]he disclosure as originally filed does not have to provide *in haec verba* support for the claimed subject matter at issue."). Identity of that which is described, however, is necessary: "What is claimed by the patent application

must be the same as what is disclosed in the specification. . . . " *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. ___, 122 S.Ct. 1831, 1840, 152 L.Ed.2d 944 (2002); *accord Lockwood v. American Airlines, Inc.*, 107 F.3d 1565, 1572, 41 USPQ2d 1961, 1966 (Fed.Cir.1997). The description in the provisional fails to meet this standard.

Undeterred, New Railhead argues that the testimony credited by the district court demonstrates at most that the provisional drawings alone do not satisfy the written description requirement, but that – read in conjunction with the rest of the specification – the adequate support requirement of § 112 ¶ 1 has been met. In particular, it assails the district court for having allegedly focused only on the abstract of the specification, and urges that the following excerpt from the provisional, with particular emphasis placed by New Railhead, discloses to one of ordinary skill the angled structure:

> Theory of operation –
>
> * * *
>
> 3. The new Asymmetrical Directional Drilling point for Rock and Hard Earth Formations combines the techniques of point contact fracturing for rock with a *high angle of attack* for hard earth as well as soft formations. Fracturing is accomplished with the application of hard carbide points on random elliptical torque vectors created as the asymmetrical geometry of the bit forms eccentric rotational paths by the combination of rotation and thrust moments. Drilling of rock like shales that are typically considered to be compressed and extremely dense and dry

clays are also enhanced by the aggressively pointed geometry of the drill bit.

4. *The asymmetrical geometry enhances the performance of the drill rack by multiplying the fracturing effect through leverage on the main drilling points.* As the bit rotates *the offset drill points* randomly fracture and engage as center points of rotation and multiply transverse moments 3 to 8 times the actual transverse moments that can be produced at the same diameter in a symmetrically formed fixed diameter drill bit.

5. Bore hole size is defined and controlled by stabilizing the forward cutting points on a *trailing shoe* that contains replaceable, semi-permanent carbide buttons that will fracture off irregular surfaces and help smooth the borehole as well as reduce the abrasive wear on the body of the bit.

We are not moved. Nothing in this disclosure even intimates to one of ordinary skill in the art the specific angled relationship between the bit and its housing. *Contra* '283 patent, col. 2, ll. 49-57 ("[T]he specially-configured asymmetric drill bit for horizontal directional drilling in rock includes a bit body attached to an end of a sonde housing. The bit body is angled with respect to the sonde housing, as best shown in Fig. 4, with the angle displacement from collinear alignment being relatively slight, that is, on the order of about 15 degrees."). Notably, while the patent discloses verbatim the language from the provisional "theory of operation" quoted by New Railhead, *see id.* col. 3, l. 49 – col. 4, l. 5, the provisional never states that the drill bit is angled with respect to the sonde housing, does not mention or describe the toe or the heel,

and does not mention or define the heel-toe ratio. The passing references to a "high angle of attack" and "high included angle offsets" in the provisional, divorced from any discussion whatsoever of the bit-housing combination, do not convey to one of ordinary skill that Cox was in possession of the bit-housing angle that is a limitation of the invention claimed in the '283 patent.

New Railhead has failed to demonstrate any error in the district court's holding that the disclosure of the provisional application does not adequately support the invention claimed in the '283 patent as to the angle limitation. As a result, the '283 patent is not entitled to the filing date of the provisional application. 35 U.S.C. § 119(e)(1). Accordingly, because the utility application that issued as the '283 patent was filed on November 12, 1997, more than one year after the admitted mid-1996 commercial offers for sale, the district court properly granted Vermeer's motion for partial summary judgment of invalidity under 35 U.S.C. § 102(b).

## IV

The district court assumed, in considering the remaining summary judgment motion, that the '743 patent was entitled to the priority date of the provisional application discussed above. Even so, it held the '743 patent invalid because the claimed method had been in public use as early as January 1996. New Railhead challenges that holding on the basis that all public use before the critical date was experimental.

A person is not entitled to a patent if the invention disclosed therein was in public use in this country more than one year before the application date for the patent.

35 U.S.C. § 102(b). The statutory phrase "public use" does not necessarily mean open and visible in the ordinary sense; it includes any use of the claimed invention by a person other than the inventor who is under no limitation, restriction, or obligation of secrecy to the inventor. *Lough v. Brunswick Corp.*, 86 F.3d 1113, 1119, 39 USPQ2d 1100, 1104 (Fed.Cir.1996); *Egbert v, Lippmann,* 104 U.S. 333, 336, 26 L.Ed. 755 (1881); *see also Elec. Storage Battery Co. v. Shimadzu,* 307 U.S. 5, 20, 59 S.Ct. 675, 83 L.Ed. 1071 (1939) ("The ordinary use of a machine or the practice of a process in a factory in the usual course of producing articles for commercial purposes is a public use.").

What would otherwise appear to be public use is negated if the inventor was testing claimed features of his invention. *EZ Dock, Inc. v. Schafer Sys., Inc.,* 276 F.3d 1347, 1353, 61 USPQ2d 1289, 1292 (Fed.Cir.2002). "When an evaluation period is reasonably needed to determine if the invention will serve its intended purpose, the § 102(b) bar does not start to accrue while such determination is being made." *Seal-Flex, Inc. v. Athletic Track & Court Constr.,* 98 F.3d 1318, 1324, 40 USPQ2d 1450, 1454 (Fed.Cir.1996). An invention can exist for the purposes of the statutory bar, however, even though it may later be refined or improved. *Baxter Int'l, Inc. v. COBE Labs., Inc.,* 88 F.3d 1054, 1060, 39 USPQ2d 1437, 1442 (Fed.Cir.1996); *Baker Oil Tools, Inc. v. Geo Vann, Inc.,* 828 F.2d 1558, 1563, 4 USPQ2d 1210, 1214 (Fed.Cir.1987). Once an inventor realizes that the invention as later claimed indeed works for its intended purpose, further "experimentation" may constitute a barring public use. *RCA Corp. v. Data Gen. Corp.,* 887 F.2d 1056, 1061, 12 USPQ2d 1449, 1453 (Fed.Cir.1989) ("[E]xperimental use, which means perfecting or completing an invention to the point of determining that

it will work for its intended purpose, ends with an actual reduction to practice.").

It is beyond debate in this case that Earl Freeman's use of the patented method was public. The method was first performed at a commercial jobsite on public land on the side of an interstate highway, and the inventor admitted he had no control over the practice of the patented *method*. Declaration of Dave Cox, J.A. at 1138-39 ("While I did not and indeed could not control the actual drilling activities Freeman performed (because he was using the bit at commercial job sites), I always felt that I retained control of the bit."). Thus, there was a barring use of the method unless that use was experimental or otherwise meant and needed to test the method.

It is of crowning importance, as the district court recognized, that all of the testimony adduced by New Railhead indicates – without equivocation – that it was only the drill bit claimed in the '283 patent, and not the method of the '743 patent, that was being tested by Freeman. The method was successfully performed numerous times in January with the first prototype of the drill bit, as evidenced by Cox's own testimony:

> Q: Let me make sure that I understand what you said. Are you saying that Earl was happy with the way the bit was working and there wasn't a need to really mess with it much more after the first few bores?
>
> A: We couldn't find anything other than to try to discover its ability to drill. We had no descriptive method other than what it was teaching us it would do and there was no adjustments that we could perceive to make at this moment. We first trying [sic] to organize and to understand the bit.

> Q: Okay. That's after the first bore, after the first 200-foot bore we talked about. Were you pretty well happy with the performance of the bit?
>
> * * *
>
> A: It probably did more than we expected it.

Cox made a second prototype bit because he did not like the appearance of the first one. Freeman then used this bit in various rock formations for a "variety of days," in which he drilled an average of 300 to 500 feet per day over the course of a three-week stretch. Further modifications were made to the bit over the ensuing months, but nothing in the record indicates that there ever was a question about the efficacy of the patented method. Indeed, the parties agreed that the January use of the drill bit later claimed in the '283 patent met each limitation of the claims in the method of the '743 patent. *Cf. Juicy Whip, Inc. v. Orange Bang, Inc.*, 292 F.3d 728 (Fed.Cir.2002) (reversing jury's invalidation based upon prior use because no reasonable juror could have found that the products at issue contained every limitation of the claimed invention).

The undisputed and indisputable facts before us resemble those before the court in *D.L. Auld Co. v. Chroma Graphics Corp.*, 714 F.2d 1144, 219 USPQ 13 (Fed.Cir.1983). The patent at issue in that case claimed a method of forming foil-backed inserts in the form of case decorative emblems. The district court determined that the method had been in public use based upon the inventor's testimony that before the critical date Auld had produced sample emblems made by hand in accordance with the claimed method. *Id.* at 1148, 714 F.2d 1144, 219

USPQ at 16. On appeal, Auld argued that the earlier use of the method had been experimental because the emblems then produced were made by the "laboratory method," as opposed to the method intended to be used to mass-produce commercial quantities of the emblems. *Id.* at 1149, 714 F.2d 1144, 219 USPQ at 17. We rejected this argument because the so-called "laboratory method" still met all of the limitations of the claim:

> [The inventor's] testimony establishes unequivocally that the "laboratory method" itself involved each step of the claimed method and that each such step was performed in producing some early samples. . . . When carefully read, the "clarifying affidavits" do not contradict those facts. . . . That Auld might have to tool up for mass production if a customer gave a large order bears no relation to whether the experimentation was required on the claimed method.

*Id.* at 1149-50, 714 F.2d 1144, 219 USPQ at 17.

And so it is here. Whatever the circumstance with respect to New Railhead's continued modifications to the drill bit claimed in the '283 patent, there is no suggestion whatsoever that Freeman's January 1996 use of the patented method did not meet each and every claim limitation in the '743 patent. New Railhead understood after the first 200-foot bore that the patented *method* had been reduced to practice, as it worked for its intended purpose. Accordingly, as a matter of law none of the subsequent uses of the method could be experimental. *Cf. Baxter Int'l, Inc.*, 88 F.3d at 1060, 39 USPQ2d at 1441-42 (noting that public use is not negated by experiments directed to tangential or unclaimed aspects of the invention).

The dissent would reverse the district court with respect to the method patent because the use took place under (as opposed to "on") public land and because "there has been no showing whatsoever that the use was anything but confidential." But this court has made clear that secrecy alone is an ineffective gauge of experimentation:

> The fact that the device was not hidden from view may make the use not secret but non-secret use is not *ipso facto* "public use" activity. Nor, it must be added, is all secret use *ipso facto* not 'public use' within the meaning of the statute, if the inventor is making commercial use of the invention under circumstances [that] preserve its secrecy.

*TP Labs., Inc. v. Professional Positioners, Inc.*, 724 F.2d 965, 972, 220 USPQ 577, 583 (Fed.Cir.1984) (citing *City of Elizabeth v. Am. Nicholson Pavement Co.*, 97 U.S. 126, 136, 24 L.Ed. 1000 (1877)). Thus, the dissent's suggestion that the patented method was not in public use because one could not view the drill bit or see it in operation rings hollow because "[i]t is not public knowledge of his invention that precludes the inventor from obtaining a patent for it, but a public use or sale of it." *Id.* at 970, 724 F.2d 965, 220 USPQ at 581 (citing *City of Elizabeth*, 97 U.S. at 136); *see also Egbert v. Lippmann*, 104 U.S. 333, 336, 26 L.Ed. 755 (1881) ("[W]hether the use of an invention is public or private does not necessarily depend upon the number of persons to whom its use is known.").

The district court did not err in granting Earth Tool's motion for summary judgment of invalidity under § 102(b). Therefore, the judgment of the trial court is in all respects

*AFFIRMED.*

Dissenting opinion filed by Circuit Judge DYK.

DYK, Circuit Judge, dissenting-in-part.

I agree with the portion of the majority opinion holding the claims of the '283 patent invalid on the ground that the disclosure of the provisional application did not support the claims. However, I respectfully dissent from the holding of invalidity of the claims of the '743 patent. Affirming a grant of summary judgment, the majority holds that the '743 patent claims are invalid on grounds of public use under 35 U.S.C. § 102(b) because the use was public and the use did not qualify for the experimental use exception. I suggest that the majority is incorrect on both grounds.

First, the majority holds that the use was necessarily public because it took place "at a commercial jobsite on public land on the side of an interstate highway." *Ante* at 1298. The use actually took place *under* public land, hidden from view, and there has been no showing whatsoever that the use was anything but confidential. In order to understand the method of using the drill bit a person at the job site would have to view the drill bit or see it in operation, and this was impossible to do while the drill bit was underground.

Cox recognized that to obtain data about the use of the prototype drill bits he needed Earl Freeman to test the bits in the field. The only person with access to the prototype drill bits and who actually used the bits before the bar date was Freeman. Cox could not control when and where Freeman tested the bits because Freeman could only operate his drilling rig with the approval of an inspector. Thus, as the majority points out, Cox was correct to admit that he "did not and indeed could not control the

actual drilling activities Freeman performed (because he was using the bit at commercial job sites). . . . " That Cox could not control the time and place the bits were used does not mean their use was public. Freeman's use of the prototype drill bits was conditioned on keeping information about the bits and their method of use secret, and Freeman was under a duty not to disclose any information about the bits or how they were used underground. Indeed, Cox testified in the very next sentence after the one quoted by the majority that he "[felt] certain Earl Freeman understood from our conversations that his activities were part of an experimental program and were not to be considered either commercial or public in nature." Further, there was evidence presented that among those with knowledge of the drill, "[t]here was no one of us that did not understand that this was supposed to be secret." There has been no showing by Vermeer or Earth Tool that the method claimed in the '743 patent was used by anyone not under a duty of confidentiality before the bar date.

The decision here is contradicted by our decision in *Moleculon Research Corp. v. CBS, Inc.*, 793 F.2d 1261, 229 USPQ 805 (Fed.Cir.1986). There, we held that the open, non-secret use of a claimed method was not a barring public use because the inventor expected knowledge of the method to remain confidential. *Id.* at 1265-66, 793 F.2d 1261, 229 USPQ at 807-08. In *Moleculon,* the patentee invented a three-dimensional puzzle capable of rotational movement (similar to the familiar Rubik's cube, the accused product in the case) and obtained a patent containing both method and apparatus claims directed to the puzzle. The apparatus claims were directed to the puzzle itself while the method claims were directed to methods of manipulating the pieces of the puzzle. The district court

found that although more than one year before filing his application the inventor "explained his puzzle to a few close colleagues," he "at all times retained control over its use as well as over the distribution of information concerning it. He never used the puzzle or permitted it used [sic] in a place or at a time when he did not have a legitimate expectation of privacy and of confidentiality." *Id.* at 1265, 793 F.2d 1261, 229 USPQ at 808. Under such circumstances, we held neither the apparatus nor the method claims were invalid under § 102(b). *Id.* at 1266, 793 F.2d 1261, 229 USPQ at 808. Here also, because Cox never used or permitted the drill bits to be used in a place or time in which he did not have a legitimate expectation of confidentiality, the drill bits and the method of using them were not in "public use" before the bar date.

The majority suggests that a use of an invention is an invalidating public use, even though secret, "if the inventor is making commercial use of the invention." *Ante* at 1299 (citations omitted). The asserted commercial use here results from the payment to Eagle Pipeline by a third party for performing drilling that, incidentally, involved use of the claimed method. If the use of an invention is "commercial" that use may be deemed public even if secret. However, in order to be commercial the use must provide a profit or commercial advantage *to the inventor. See Kinzenbaw v. Deere & Co.*, 741 F.2d 383, 391, 222 USPQ 929, 934 (Fed.Cir.1984) ("In using the machines to test them for Deere, the farmers served Deere's commercial purposes. . . . [T]he testing of the machines was a commercial use by Deere of its patented invention."); *D.L. Auld Co. v. Chroma Graphics Corp.*, 714 F.2d 1144, 1147, 219 USPQ 13, 15 (Fed.Cir.1983) ("[T]he intent of [invalidating claims based on commercial use] is to preclude

attempts by the inventor or his assignee to profit from commercial use of an invention for more than a year before an application for patent is filed."); *Metallizing Eng'g Co. v. Kenyon Bearing & Auto Parts Co.*, 153 F.2d 516, 520, 68 USPQ 54, 58 (2d Cir.1946) ("It is indeed true that an inventor may continue for more than a year to practice his invention for his private purposes or his own enjoyment and later patent it. But that is, properly considered, not an exception to the doctrine, for he is not then making use of his secret to gain a competitive advantage over others."). Here there is no evidence on summary judgment that the inventor profited from the alleged use or gained a commercial advantage. The mere fact that Eagle Pipeline gained a profit is irrelevant.

Further, even if the majority were correct in finding that the claimed method was in public use prior to the critical date, the majority is incorrect in finding that the use of the method was not experimental. The majority's theory appears to be that the inventor was satisfied with the method after tests in early January, and that further testing was designed only to test the particular bits and not the method. The majority states that "all of the testimony adduced by New Railhead indicates without equivocation that it was only the drill bit claimed in the '283 patent, and not the method of the '743 patent, that was being tested by Freeman." *Ante* at 1298. The testimony does not in fact separately address the method and the bit. Nor could the two be separated. The method and the bit were inextricably intertwined. The claims of the '743 patent were specifically directed to "method[s] of horizontal directional drilling in rock." '743 patent, col. 5, l. 18. Claim 1, the only independent claim, recites "[a] method of horizontal directional drilling in rock, comprising the step

of causing a drill bit at one end of a drill string to intermittently rotate as it digs in, stops rotation until the rock fractures, and then moves after fracture in a random, orbital intermittent motion." *Id.* at col. 5, l. 18 col. 6, l. 2. Drilling with the experimental bits was plainly a test of the claimed method. The method would not work if the drill bit did not work. During the experimental period both the drill bit and the method of using it were being tested.

After being generally satisfied in January with both the method and the bit, the testing continued to determine the durability of the bit. (Cox Dep. at 79-80) (stating that "[w]e would run [the bits] until they went down to figure out what footage we could get, the type of penetration and sometimes put them in some awful conditions to see if they could survive."). The question is whether such further testing was experimental. We have held in earlier cases that testing durability is an appropriate part of testing inventions where durability is an implicit feature of the invention, even if not claimed specifically. *See EZ Dock, Inc. v. Schafer Sys., Inc.*, 276 F.3d 1347, 1353, 61 USPQ2d 1289, 1293 (Fed.Cir.2002); *Manville Sales Corp. v. Paramount Sys., Inc.*, 917 F.2d 544, 550, 16 USPQ2d 1587, 1592 (Fed.Cir.1990). As we discussed in *EZ Dock:*

> In *Manville Sales Corp. v. Paramount Sys. Inc.*, 917 F.2d 544, 550, 16 USPQ2d 1587, 1592 (Fed.Cir.1990), this court permitted the inventor to test the invention for durability during winter although claims did not expressly mention durability or severe weather conditions. Instead this court reasoned that the nature of the invention (luminaires) required durability so that the claims' reference to the subject matter placed that topic within the proper frame of experimentation. In this case, the '055 patent claims a

> floating dock. These floating docks, by their nature, must endure all kinds of water conditions, including choppy water created by weather and boating. The waters at Bass Camp, the location of Mr. Greden's dock, were much rougher than the waters in Mr. Neitzke's marina where he was testing other dock sections. Mr. Neitzke testified that he sold the dock to Mr. Greden to test how it would hold up under these more turbulent water conditions. In other words, Mr. Neitzke testified that he sold the dock to Mr. Greden to determine whether it was "capable of performing its intended purpose in its intended environment." *Gould,* 579 F.2d at 583 [*Gould Inc. v. United States,* 217 Ct.Cl. 167, 579 F.2d 571, 198 USPQ 156 (Ct.Cl.1978) ].

*Id.* at 1353, 276 F.3d 1347, 61 USPQ2d at 1293. Here durability of the bit is an implied feature of the method claimed, as a method would not be found to serve its intended purpose if the practice of the method prematurely destroyed the tools used to practice the method. "When an evaluation period is reasonably needed to determine if the invention will serve its intended purpose, the § 102(b) bar does not start to accrue while such determination is being made." *Seal-Flex, Inc. v. Athletic Track & Court Constr.,* 98 F.3d 1318, 1324, 40 USPQ2d 1450, 1454 (Fed.Cir.1996).

Under the majority's holding, Cox should have filed his application for the method patent within one year of beginning testing of the drill bit even if he had not completed testing of the drill bit used in the method for durability. We should not adopt so stringent a test for experimental use that we force prospective patent applicants to prematurely file with the Patent Office. Rather we

should be faithful to our earlier cases, which apply a more sensible and realistic test.

For the foregoing reasons, I respectfully dissent.

IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF TEXAS
FORT WORTH DIVISION

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| NEW RAILHEAD MANUFACTURING, L.L.C. | § | |
| | § | |
| | § | ACTION NO. |
| v. | § | 4:99-CV-355-Y |
| | § | |
| VERMEER MANUFACTURING COMPANY and Earth Tool Company, L.L.C. | § | |
| | § | |
| | § | |

ORDER GRANTING EARTH TOOL'S MOTION FOR SUMMARY JUDGMENT

(Filed Sep. 28, 2001)

Pending before the Court is the Motion for Partial Summary Judgment filed by defendant Earth Tool Company, L.L.C. ("Earth Tool") on July 7, 2000. Plaintiff New Railhead Manufacturing, L.L.C. ("Railhead") filed a response in opposition to the motion on July 27, and Earth Tool filed a reply to Railhead's response on August 11. On August 13, 2001, after obtaining leave of Court, Railhead filed a supplemental response to the motion, and on August 27, Earth Tool filed a reply to Railhead's supplemental response. Oral argument was heard regarding Earth Tool's motion on September 19. After careful consideration of the briefs submitted by the parties, the evidence highlighted therein, the applicable law, and the arguments of counsel, the Court concludes that Earth Tool's motion should be granted.

## I. Facts

Railhead owns United States Patent 5,899,283 ("the '283 patent"), which claims an asymmetric drill bit used

for horizontal directional drilling of rock. Railhead's "Incredibit" is an embodiment of the '283 patent. Railhead's '283 patent is based on an application filed November 12, 1997 as a continuation-in-part of a provisional patent application filed February 5, 1997.

The drill bit that is the subject of the '283 patent was invented by David Cox, co-owner of Railhead, in late 1995. Sometime between Christmas 1995 and New Year's 1996, Cox delivered a version of this bit to Earl Freeman, an employee of one of Railhead's customers, Eagle Pipeline, allegedly for experimentation. Freeman used the bit approximately six times on various Eagle Pipeline jobs throughout January 1996. Soon thereafter, Railhead manufactured hundreds of similar bits. Railhead sold one of the bits to Ferrell Construction at the end of March 1996. Railhead also admits that one or more bits embodying the '283 patent were sold prior to the end of May 1996. Indeed, Railhead's invoices reflect numerous sales of the bit during the period from March to August 1996.

Railhead filed this lawsuit contending that the "Trihawk" drill bit manufactured by Earth Tool infringes Railhead's '283 patent. Earth Tool's motion seeks a summary judgment that the '283 patent is invalid because, inter alia, the bit embodying the '283 patent was on sale more than one year prior to the earliest filing date on which the '283 patent is based.

## II. Summary Judgment Standard

The summary-judgment standard on a patent claim is the same as the standard for other claims. *Avia Group Int'l v. L.A. Gear Calif., Inc.*, 853 F.2d 1557, 1560-61 (Fed. Cir. 1988). Thus, Earth Tool is entitled to summary judgment if

it demonstrates "that there is no genuine issue as to any material fact and that [it] is entitled to judgment as a matter of law." FED. R. CIV. P. 56(c). All reasonable factual inferences must be drawn in favor of the nonmovant. *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 255 (1986).

A patent is, however, presumed to be valid. 35 U.S.C.A. § 282 (West Supp. 2001). As a result, "the burden of proving invalidity [is] on the attacker." *Hycor Corp. v. Schlueter Co.*, 740 F.2d 1529, 1536 (Fed. 1984). Consequently, on summary judgment, Earth Tool's "burden of demonstrating an entitlement to judgment as a matter of law includes the burden of overcoming the presumption of patent validity found in 35 U.S.C. § 282." *Cable Elec. Prods., Inc. v. Genmark, Inc.*, 770 F.2d 1015, 1022 (Fed. Cir. 1985), *overruled on other grounds by Midwest Indus., Inc. v. Karavan Trailers, Inc.*, 175 F.3d 1356, 1358-61 (Fed. Cir. 1999). "The standard of proof of facts necessary to support a legal conclusion of invalidity is 'clear and convincing.'" *Id.* (quoting *R.R. Dynamics, Inc. v. Stucki Co.*, 727 F.2d 1506, 1516 (Fed. Cir. 1984)). As a result, in order to be entitled to summary judgment, Earth Tool must demonstrate that there is no genuine issue of material fact regarding the patent's validity and that clear and convincing evidence demonstrates that the patent is invalid.

## III. Analysis

Earth Tool contends that Railhead's '283 patent is invalid because it was on sale more than a year prior to the date the application for patent was filed. A person is not entitled to a patent if "the invention was . . . on sale in this country more than one year prior to the date of the application for patent in the United States." 35 U.S.C.A.

§ 102(b) (West 1984). Thus, the "critical date" in analyzing the on-sale bar found in § 102(b) is one year prior to the date the patent application was filed.

Railhead's patent application was filed on November 12, 1997. On February 5, however, Railhead had filed a provisional patent application under 35 U.S.C. § 111(b). A provisional application must include a specification and drawing, but, unlike a patent application, does not need to include a claim. 35 U.S.C.A. § 111(b)(1) & (2) (West Supp. 2001). Railhead contends that its '283 patent is entitled to the priority of the provisional application. As a result, according to Railhead, the February 5, 1997 date of filing the provisional application should be used in calculating the critical date for § 102(b)'s on-sale bar, rather than the November 12, 1997 date the patent application was filed.

The patent statutes allow for such priority, but only if the provisional application discloses the invention "in the manner provided by the first paragraph of section 112 of this title." 35 U.S.C.A. § 119(e)(1) (West Supp. 2001). That paragraph requires as follows:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same. . . .

35 U.S.C.A. § 112 (West 1984). "To fulfill the written description requirement, the patent specification 'must clearly allow persons of ordinary skill in the art to recognize that [the inventor] invented what is claimed.'" *Gentry Gallery, Inc. v. Berkline, Corp.*, 134 F.3d 1473, 1479 (Fed.

Cir. 1998) (alteration in original) (quoting *In re Gosteli,* 872 F.2d 1008, 1012 (Fed. Cir. 1989)). In other words, the application must "convey with reasonable clarity to those skilled in the art that, as of the filing date sought, [the inventor] was in possession *of the invention.*" *Vas-Cath Inc. v. Mahurkar,* 935 F.2d 1555, 1563-64 (Fed. Cir. 1991); *see also Ralston Purina Co. v. Far-Mar-Co, Inc.,* 772 F.2d 1570, 1575 (Fed. Cir. 1985) ("[T]he test for sufficiency of support in a parent application is whether the disclosure of the application relied upon 'reasonably conveys to the artisan that the inventor had possession at that time of the later claimed subject matter.'") (quoting *In re Kaslow,* 707 F.2d 1366, 1375 (Fed. Cir. 1983)). "The invention is, for purposes of the 'written description' inquiry, *whatever is now claimed.*" *Vas-Cath,* 935 F.2d at 1564.

Thus, for Railhead to be entitled to the filing date of the provisional application, that application must have included a written description that disclosed to one skilled in the art that, on the date the provisional application was filed, Cox was in possession of the invention ultimately claimed in the '283 patent. Earth Tool contends that Railhead's provisional application did not fulfill this requirement and that, as a result, Railhead is not entitled to rely on that application's filing date.

The '283 patent claims "[a]n asymmetric drill bit for horizontal directional drilling in rock, comprising: a bit body attached to an end of a sonde housing [that is] angled with respect to the sonde housing." (Def.'s App. at 339.) Railhead's proposed claim construction statement contends that the '283 patent's claim language, "angled with respect to the sonde housing," refers to the offset placement of the "toe" and the "heel" of the drill bit in relation to the sonde housing. (Def.'s Supp. App. at 68.) Cox, the

inventor of the bit, testified that the "toe" means "the teeth" of the bit, which protrudes below the front of the sonde housing, whereas the "heel" is "the base part, the far protrusion" on the other side of the sonde housing. (Def.'s App. at 399.) Cox further testified that he "invented the methodology of the bit's toe-to-heel ratio," (Def.'s App. at 404), and that the [sic] "the toe-to-heel ratio is what makes [the bit] accomplish its random drill," (Def.'s App. at 393). According to Cox, the "toe-to-heel ratio" means "the amount above and the amount below" the "outer circumference of the sonde housing." (Def.'s App. at 374; Pl.'s App. at 5, ¶ 6.)

In light of the '283 patent's claim, the provisional application must disclose to one skilled in the art that the drill bit Cox invented was "angled with respect to the sonde housing," or, in other words, had a toe and heel that were offset from the outer circumference of the sonde housing. After careful review of the provisional application and the evidence submitted by the parties, the Court concludes that no genuine issue of material fact exists regarding this issue, and that Earth Tool has demonstrated by clear and convincing evidence that the provisional application does not satisfy this requirement.

Initially, Earth Tool points to the summary language of the provisional application's specification and notes that it contains none of the same language as the '283 patent's claim. The summary language of the provisional application is as follows:

> A directional earth boring tool for boring all earth formations such as dirt, sand, rock and/or any type combination of formations, utilizing a bit body containing fixed and semi-floating cutting points and one or more fluid channels for the

> purpose of lubricating and dispersing cut and/or fractured formations. [A] high impact point-fracturing method of removal of dense or rock formations and also creates a high-velocity orbital node while drilling softer or less dense formations. The beveled cavity within the bit design allows the bit to be steerable in all formations. The bit body is attached to the boring drill body, which contains at least one or more fluid channels, by means of an interference connection that withstands transverse loading. The asymmetrical method of attachment incorporates resultant reactions from the drill stem and drill body derived from input torque and thrust supplied by drilling machine, to create a random elliptical pattern while boring which also creates a hole larger than the concentric design of the drill body would typically allow.

(Def.'s App. at 346.) Nothing in this language states that the drill bit is "angled with respect to the sonde housing" or otherwise describes the toe, the heel, or the toe-to-heel ratio. Though the language refers to an "asymmetrical method of attachment," that simply does not necessarily imply that the toe and heel of the bit are attached with a certain amount of the heel protruding above the sonde housing and a certain amount of the toe protruding out below the sonde housing.

Railhead attached two drawings to its provisional applications and focuses on these drawings to support its contention that the provisional application adequately discloses the invention. *See* Pl.'s Response at 23-24; Pl.'s App. at 5-6. As Earth Tool points out, however, it is impossible to tell from the angle of these drawings that the heel and toe of the drill bit are offset from the circumference of the sonde housing. In support of its contention, Earth Tool

presented the declaration of Randy R. Runquist. Runquist, who is experienced in the area of trenchless drilling and bit design for such drilling, states as follows:

> The two drawings included in the provisional application are drawn at such an angle that one of skill in the art cannot tell how the device would look from the side view. To the extent the Incredibit has a "toe" and a "heel" which stick out beyond the outer diameter of the sonde housing when the bit is mounted on the sonde housing, one of ordinary skill in the art cannot tell whether or how much the "heel" and "toe" stick out. The angle of perspective on the drawings shows only a variation of a top view which prevents comparison of the toe or the heel to the diameter of the sonde housing.

(Def.'s App. at 476.)

Indeed, Cox admitted as much in his deposition. Regarding the two drawings attached to the provisional application, Cox testified as follows:

> Q: This figure [figure 1 of the provisional application] does not reflect the heel or toe angle, does it?
>
> A: Well, me knowing it, I know it's there, I can see because of the thinness at the top right prior to the door. It's on the back side of it. I do not see the head or the top part of the bit at this moment. Knowing how it seats, I – You know, I don't know what you're driving at.
>
> Q: You know from understanding the configuration of the Incredibit that it has a heel and a toe?
>
> A: Correct.

Q: But this drawing, Figure 1, does not show that heel and toe, does it?

A: Correct. That's not the only drawing provided.

Q: Let's go to the next drawing, Drawing 2. Drawing 2 is a different view of the bit, sonde and parts of the starter rod, is that correct?

A: The points, the bits, yes.

. . . .

Q: Can you see in Figure 2 the heel?

A: I see it, yes.

Q: Okay. Can you see the toe on that drawing?

A: Knowing it's on the back side, yes.

Q: But that comes from your familiarity with the Incredibit itself as opposed to being able to see the actual toe on this drawing; am I correct?

A: I don't face you, you won't see my face. It's not facing that side of it.

Q: That's right, it's not facing from the right direction to see the toe; right?

A: Correct.

(Def.'s Supp. App. at 6-8.) [1]

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[1] And, the testimony of Joseph Wade Steele, which was submitted in support of defendant Vermeer's Motion for Summary Judgment, supports Runquist's and Cox's deposition testimony on this issue. Steele is currently responsible for Railhead's research and development and, aside from David Cox, is the Railhead employee most familiar with Railhead's drill bit. (Def. Vermeer's Supp. App. at 53-55, 59-61.) Steele

(Continued on following page)

The only evidence Railhead submits to counter the evidence highlighted by Earth Tool is the declaration of Cox. As Earth Tool points out in its Motion to Strike Cox's declaration, however, Cox's declaration is contrary to his deposition on this point. In his declaration, Cox states as follows:

> To my eye the drawings which were submitted with the provisional application clearly show a heel portion and a toe portion, each of the portions extending respectively above and below the outer circumference of the sonde housing. Although the drawings show the two pieces in exploded con-

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testified about the provisional application for Railhead's '743 patent, which claims the method of drilling performed when using the Railhead drill bit claimed in the '283 patent. The provisional application for the '743 patent contains the same drawings as the provisional application for the '283 patent. Regarding those drawings, Steele testified as follows:

Q: Okay. I'm going to show you what's part of Exhibit 101 [Figure 1 of the '743 patent's provisional application]. Can you tell me from this drawing if the teeth extend below the sonde housing?

A: No, sir.

Q: Can you tell me if the back portion of the bit extends above the sonde housing?

A: No, sir.

Q: Let's turn to page – to ET02951 [Figure 2 of the '743 patent's provisional application]. Same question, can you tell me from that drawing if the teeth extend below the sonde housing?

A: No, I can't.

Q: Can you tell me if the heel portion of the bit extends above the sonde housing?

A: No.

(Def. Vermeer's Supp. App. at 63.)

> figuration, I believe that because they are accurate scaled drawings of the actual tool, one of ordinary skill could actually construct the tool itself from these drawings and if that were done, the heel and toe portion would be present.

(Pl.'s App. at 5.) Cox's declaration contradicts his deposition testimony, wherein he admitted that the toe and heel and, by implication, the ratio between the two, are not apparent from the drawings attached to the provisional application. A party cannot defeat a motion for summary judgment by filing a declaration that impeaches, without explanation, his earlier sworn testimony. *S.W.S. Erectors, Inc. v. Infax, Inc.*, 72 F.3d 489, 495 (5th Cir. 1996). This is exactly what Railhead has attempted to do. Railhead's response to Earth Tool's Motion to Strike attempts to explain away Cox's impeaching declaration, contending that Cox was confused by the questioning and that, in any event, Cox was focusing solely on the drawings in answering the questions during his deposition and not on the totality of the disclosure in the provisional application, which is allegedly what he focused on in his declaration. The Court has thoroughly reviewed this portion of Cox's deposition testimony, however, and disagrees with Railhead's contention that the questioning was confusing; indeed, the questioning appears to the Court to have been clear and succinct. Furthermore, the Court has already reviewed the summary language in the provisional application and found that nothing therein revealed the importance of the toe and heel's placement in relation to the sonde housing. Thus, Railhead's suggestion that Cox is merely clarifying his testimony based upon the entirety of the provisional application's disclosure is sophistry. In short, Cox's declaration regarding the disclosure of the toe-to-heel ratio in the provisional application's drawings is

inconsistent with his prior deposition testimony and is thus insufficient to create a material issue of fact.[2]

Consequently, Railhead has failed to create a genuine issue of material fact regarding this issue. Furthermore, the Court concludes that Earth Tool has presented clear and convincing evidence, in the form of Runquist's, Cox's, and Steel's deposition testimony and a comparison of the language and drawings of the provisional application and the claims of the '283 patent, that Railhead is not entitled to rely on the provisional application's filing date. Because uncontroverted evidence establishes that the bit was on sale prior to November 12, 1996, the Court concludes that Earth Tool has demonstrated that Railhead's '283 patent is invalid.

## IV. Conclusion

For the foregoing reasons, Earth Tool's Motion for Partial Summary Judgment [document number 55-1] is hereby GRANTED. Earth Tool has demonstrated by clear and convincing evidence that Railhead's '283 patent is invalid because it was on-sale prior to November 12, 1996, the applicable critical date for purposes of the on-sale bar contained in section 102(b) of Title 35.

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[2] As indicated in a separate order issued this same day ruling on Earth Tool's Motion to Strike, however, the Court is not inclined to strike Cox's declaration.

SIGNED September 28, 2001.

/s/ Terry R. Means
TERRY R. MEANS
UNITED STATES DISTRICT
JUDGE

IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF TEXAS
FORT WORTH DIVISION

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| NEW RAILHEAD MANUFACTURING, L.L.C. | § | |
| VS. | § | ACTION NO. 4:99-CV-355-Y |
| VERMEER MANUFACTURING COMPANY and EARTH TOOL COMPANY, L.L.C. | § | |

ORDER GRANTING VERMEER'S
MOTION FOR SUMMARY JUDGMENT

(Filed Sep. 28, 2001)

Pending before the Court is the Motion for Summary Judgment that United States Patent No. 5,950,743 is Invalid, which was filed by defendant Vermeer Manufacturing Company on November 1, 2000. Plaintiff New Railhead Manufacturing, L.L.C. ("Railhead") filed a response in opposition to the motion on November 22, and Vermeer filed a reply to Railhead's response on December 7. Oral argument was heard regarding Vermeer's motion on September 19. After careful consideration of the briefs submitted by the parties, the evidence highlighted therein, the applicable law, and the arguments of counsel, the Court concludes that Vermeer's motion should be granted.

## I. Facts

Railhead owns United States Patent 5,899,283 ("the '283 patent"), which claims an asymmetric drill bit used for horizontal directional drilling of rock. Railhead's "Incredibit" is an embodiment of the '283 patent. Railhead's '283 patent is based on an application filed November 12, 1997 as

a continuation-in-part of a provisional patent application filed February 5, 1997.

Railhead also owns United States Patent 5,950,743 ("the '743 patent"), which claims "[a] method of horizontal directional drilling in rock, comprising the step of causing a drill bit at one end of a drill string to intermittently rotate as it digs in, stops rotation until the rock fractures, and then moves after fracture in a random, orbital intermittent motion." (Def.'s App. at 11.) The parties agree, for purposes of this motion, that "the natural operation of the Railhead bit in rock causes the bit to practice the method claimed in the '743 patent." (Def.'s Br. at 6-7.) Railhead's '743 patent is based on a patent application filed on November 12, 1997 as a continuation-in-part of the same provisional application filed on February 5, 1997.

The drill bit that is the subject of the '283 patent was invented by David Cox, co-owner of Railhead, in late 1995. Sometime between Christmas 1995 and New Year's 1996, Cox delivered a version of this bit to Earl Freeman, an employee of one of Railhead's customers, Eagle Pipeline, allegedly for experimentation. Freeman used the bit approximately six times on various Eagle Pipeline jobs throughout January 1996.

Railhead filed this lawsuit contending that the "Trihawk" drill bit manufactured by defendant Earth Tool Company, L.L.C. ("Earth Tool") infringes Railhead's '283 patent. Railhead further contends that Vermeer has obtained Trihawk drill bits from Earth Tool and distributed them to retailers and, in so doing, has infringed the '283 patent and induced others to practice the method claimed in the '743 patent. Vermeer's motion, which is limited to the claims regarding the '743 patent, seeks a

summary judgment that the '743 patent is invalid because, inter alia, the drilling method claimed in the patent was publicly used more than one year prior to the filing date of the provisional application on which the '743 patent is allegedly based.

## II. Summary Judgment Standard

The summary-judgment standard on a patent claim is the same as the standard for other claims. *Avia Group Int'l v. L.A. Gear Calif., Inc.*, 853 F.2d 1557, 1560-61 (Fed. Cir. 1988). Thus, Vermeer is entitled to summary judgment if it demonstrates "that there is no genuine issue as to any material fact and that [it] is entitled to judgment as a matter of law." FED. R. CIV. P. 56(c). All reasonable factual inferences must be drawn in favor of the nonmovant. *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 255 (1986).

A patent is, however, presumed to be valid. 35 U.S.C.A. § 282 (West Supp. 2001). As a result, "the burden of proving invalidity [is] on the attacker." *Hycor Corp. v. Schlueter Co.*, 740 F.2d 1529, 1536 (Fed. Cir. 1984). Consequently, on summary judgment, Vermeer's "burden of demonstrating an entitlement to judgment as a matter of law includes the burden of overcoming the presumption of patent validity found in 35 U.S.C. § 282." *Cable Elec. Prods., Inc. v. Genmark, Inc.*, 770 F.2d 1015, 1022 (Fed. Cir. 1985), *overruled on other grounds by Midwest Indus., Inc. v. Karavan Trailers, Inc.*, 175 F.3d 1356, 1358-61 (Fed. Cir. 1999). "The standard of proof of facts necessary to support a legal conclusion of invalidity is 'clear and convincing.'" *Id.* (quoting *R.R. Dynamics, Inc. v. Stucki Co.*, 727 F.2d 1506, 1516 (Fed. Cir. 1984)). As a result, in order

to be entitled to summary judgment, Vermeer must demonstrate that there is no genuine issue of material fact regarding the patent's validity and that clear and convincing evidence demonstrates that the patent is invalid.

## III. Analysis

Vermeer contends that Railhead's '743 patent is invalid because it was in public use more than a year prior to the date the patent application was filed. A person is not entitled to a patent if "the invention was . . . in public use . . . in this country more than one year prior to the date of the application for patent in the United States." 35 U.S.C.A. § 102(b) (West 1984). Thus, the "critical date" in analyzing the public-use bar found in § 102(b) is one year prior to the date the patent application was filed.

Railhead's patent application was filed on November 12, 1997. Several months prior to that, however, Railhead filed a provisional patent application under 35 U.S.C. § 111(b). A provisional application must include a specification and drawing, but, unlike a patent application, does not need to include a claim. 35 U.S.C.A. § 111(b)(1) & (2) (West Supp. 2001). Railhead contends that its '743 patent is entitled to the priority of the provisional application. *See* 35 U.S.C.A. § 119(e)(1) (West Supp. 2001). For purposes of its public-use argument, Vermeer assumes that Railhead is correct. As a result, the February 5, 1997 date of filing the provisional application will be used in calculating the critical date for § 102(b)'s public-use bar. Vermeer therefore must demonstrate by clear and convincing evidence that the method claimed in the '743 patent was publicly used more than one year prior to February 5, 1997.

In support of its contention, Vermeer points to the uses of Railhead's drill bit made by Earl Freeman. The evidence reflects that Freeman used Railhead's bit on at least six occasions at various Eagle Pipeline commercial jobs during January 1996.[1] The jobs were performed by a crew of up to six people on "public land on the side of the road." (Def.'s App. at 51-52.) As previously mentioned, the parties agree that the natural operation of the Railhead bit causes the bit to practice the method claimed in the '743 patent. Thus, Freeman used the '743 patent's claimed method of drilling on commercial jobs in a public setting at least six times during the month. Vermeer has made a prima facie showing that Freeman engaged in public uses of the '743 patent's method.

In response, Railhead attempts to demonstrate that Freeman's use was experimental. If the use was experimental, it is not considered a public use under § 102(b). *Elizabeth v. Pavement Co.*, 97 U.S. 126, 134 (1877). Despite the presumption of patent validity, Vermeer, having made a prima facie showing of public use, does not have the burden to prove that the use was *not* experimental; rather, in order now to create an issue of fact, Railhead must produce convincing evidence of experimental use:

> The trial court did not shift to [the patent owner] the burden of proving the validity of the '548

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[1] Although Vermeer has not cited any direct evidence specifically demonstrating that Eagle Pipeline was paid for those jobs, Railhead admits that the bit was used on Eagle Pipeline's "commercial job sites," (Def.'s App. at 64), and it is proper to infer from that admission and from the evidence presented that these were jobs being performed by Eagle for customers in the normal course of its business and, therefore, for pay. *See* Def.'s App. at 47-52.

> patent. Instead, the trial court correctly imposed on [the patent owner] the burden of going forward with convincing evidence to counter [the challenger's] prima facie showing of invalidating public use. As this court said in *TP Laboratories,* 724 F.2d at 971, 220 USPQ at 582:
>
> > Thus, the court should . . . [look] at all of the evidence put forth by both parties and should . . . [decide] whether the entirety of the evidence led to the conclusion that there had been "public use." This does not mean, of course, that the challenger has the burden of proving that the use is not experimental. Nor does it mean that the patent owner is relieved of explanation. It means that if a prima facie case is made of public use, *the patent owner must come forward with convincing evidence to counter that showing.*

*Hycor Corp. v. Schlueter Co.,* 740 F.2d 1529, 1537 (1984); *see also MSM Invs. Co., L.L.C. v. Carolwood Corp.,* 70 F. Supp. 2d 1044, 1052-53 (N.D. Cal. 1999), *aff'd,* 259 F.3d 1335 (Fed. 2001).

Railhead has failed to present convincing evidence that Freeman's January 1996 uses of the '743 patent's drilling *method* were experimental. It is well settled that "the experimental use exception does not apply to experiments performed with respect to nonclaimed features of an invention." *In re Brigance,* 792 F.2d 1103, 1109 (Fed. Cir. 1986); *see also D.L. Auld Co. v. Chroma Graphics Corp.,* 714 F.2d 1144, 1149-51 (Fed. Cir. 1983); *In re Smith,* 714 F.2d 1127, 1136 (Fed. Cir. 1983). Railhead's drill bit is not a claimed feature of the '743 patent; rather, Railhead obtained a separate patent – the '283 patent – for the drill bit. In its response to Vermeer's motion, however, Railhead

focuses on evidence of experimentation regarding the drill bit. For example, Railhead notes that "Cox and Freeman entered into a secrecy agreement pursuant to which Freeman would test the bit in actual field conditions and report back to Cox on how it performed," (Pl.'s Resp. at 11,) and that "Cox directed Freeman to use the bit in rocky conditions and to report back so Cox could learn how the bit operated and experiment with additional designs," (Pl.'s Resp. at 12). Railhead also points out that different bit configurations were tried, that one bit was returned for modifications because it did not steer properly, that Cox told Railhead's attorney that "experimental use of one [drill] prototype" had occurred prior to late February, and that a September 1996 magazine article "reports that [the] new Railhead drill bit is under development and being tested." (Pl.'s Resp. at 14, 17.) All of Railhead's evidence of experimental use pertains to the allegedly experimental uses of the drill *bit;* Railhead presents no specific evidence tending to demonstrate that Freeman's uses constituted experimentation regarding the drilling *method.* Consequently, Railhead has failed to counter Vermeer's evidence of Freeman's public uses of the drilling method prior to the critical date with evidence demonstrating that Freeman's uses of the method were instead experimental. As a result, Vermeer is entitled to summary judgment that the '743 patent is invalid.

## IV. Conclusion

For the foregoing reasons, Vermeer's Motion for Summary Judgment that United States Patent No. 5,950,743 is Invalid [document number 86-1] is hereby GRANTED. Vermeer has demonstrated by clear and

convincing evidence that Railhead's '743 patent is invalid because it was in public use prior to February 5, 1996.

SIGNED September 28, 2001.

/s/ Terry R. Means
TERRY R. MEANS
UNITED STATES DISTRICT JUDGE

**UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT**

02-1208

NEW RAILHEAD MANUFACTURING, L.L.C.,

Plaintiff-Appellant,

v.

VERMEER MANUFACTURING COMPANY,

Defendant-Appellee,

and

EARTH TOOL COMPANY, L.L.C.,

Defendant-Appellee.

**ORDER**

(Filed Sep. 25, 2002)

A petition for rehearing en banc having been filed by the APPELLANT, and responses thereto having been invited by the court and filed by the APPELLEES,* and the matter having first been referred as a petition for rehearing to the panel that heard the appeal, and thereafter the petition for rehearing en banc and response having been referred to the circuit judges who are in regular active service.

UPON CONSIDERATION THEREOF, it is

ORDERED that the petition for rehearing be, and the same hereby is, DENIED and it is further

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* Separate responses were filed by the Earth Tool Company, L.L.C., and Vermeer Manufacturing Company.

ORDERED that the petition for rehearing en banc be, and the same hereby is, DENIED.

The mandate of the court will issue on October 2, 2002.

FOR THE COURT,

/s/ Jan Horbaly (AV)
Jan Horbaly
Clerk

Dated: September 25, 2002

cc: Roy W. Hardin
Jon Trembath, Craig B. Florence

NEW RAILHEAD MFG V VERMEER MFG, 02-1028

(DCT-99-CV-355)

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* Note: Pursuant to Fed Cir. R. 47.6, this order is not *
* citable as precedent. It is a public record. *
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